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Ultra-processed food makes up almost two-thirds of calorie intake of UK adolescents

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Adolescents consume around two-thirds of their daily calories from ultra-processed foods (UPFs) new research from the Universities of Cambridge and Bristol has found.

The study found that UPF consumption was highest among adolescents from deprived backgrounds, those of white ethnicity, and younger adolescents.

UPFs are food items that are manufactured from industrial substances and contain additives such as preservatives, sweeteners, colourings, flavourings, and emulsifiers. UPFs vary greatly, but tend to indicate poor dietary quality, with higher levels of added sugars, saturated fat, and sodium, as well as decreased fibre, protein, and micronutrient content. They have been suggested as one of the key drivers of the global rise in diseases such as obesity, type 2 diabetes, and cancer.

Globally, the availability and sales of UPFs have increased over time and previous evidence suggests that this has led to increased consumption among adolescents. To look at trends within the UK, researchers from Cambridge and Bristol analysed data from four-day food diaries of almost 3,000 adolescents in the UK National Diet and Nutrition Survey between 2008/09 and 2018/19.

In research published today in the *European Journal of Nutrition*, the researchers found that a mean of 66% of adolescents' energy intake came from UPF consumption during this period, though there was a slight fall from 68% to 63% between 2008/09 and 2018/2019.

Parents' occupation, ethnic group and UK region all influenced the proportion of calorie intake from UPFs:

- Adolescents from disadvantaged backgrounds consumed a higher proportion of their calorie intake from UPFs compared to adolescents from less disadvantaged backgrounds (68.4% compared with 63.8%).
- Adolescents from a non-white ethnicity consumed a lower proportion of their calorie intake from UPFs (59.0% compared with 67.3%).
- Adolescents living in the North of England consumed a higher proportion of their calorie intake from UPFs compared with those living in the South of England and London (67.4% compared with 64.1%).
- 18-year-olds consumed a lower proportion of their calorie intake from UPFs compared with 11-year-olds (63.4% compared with 65.6%).

Dr Yanaina Chavez-Ugalde from the Medical Research Council (MRC) Epidemiology Unit at the University of Cambridge, the study's first author, said: "Adolescents' food patterns and practices are influenced by many

factors, including their home environment, the marketing they are exposed to and the influence of their friends and peers. But adolescence is also an important time in our lives where behaviours begin to become ingrained.

“It’s clear from our findings that ultra-processed foods make up the majority of adolescents’ diets, and their consumption is at a much higher level than is ideal, given their potential negative health impacts.”

The researchers argue that the observed reduction in UPF intake pre-pandemic could be partly explained by an increased public awareness and health concerns associated with sugar consumption, government-led campaigns, sugar-taxes in other countries and the reformulation of sugary drinks to reduce their sugar content.

Dr Esther van Sluijs from the MRC Epidemiology Unit at Cambridge, joint senior author, said: “Ultra-processed foods offer convenient and often cheaper solutions to time- and income-poor families, but unfortunately many of these foods also offer poor nutritional value. This could be contributing to the inequalities in health we see emerging across childhood and adolescence.”

Dr Zoi Toumpakari from the Centre for Exercise, Nutrition and Health Sciences at the University of Bristol, joint senior author, added: “Our findings suggest that disparities in consumption of ultra-processed foods are not just down to individual choices. We hope this evidence can help guide policymakers in designing more effective policies to combat the negative effects of ultra-processed food consumption among youth and the ripple effects this has on public health.”

This study was largely funded by the National Institute for Health and Care Research School for Public Health Research.

Reference

Chavez-Ugalde, Y et al. Ultra-processed food consumption in UK adolescents: distribution, trends, and sociodemographic correlates using the National Diet and Nutrition Survey 2008/09 to 2018/19. Eur J Nutr; 17 Jul 2024; DOI: 10.1007/s00394-024-03458-z

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